

**Commonwealth of Kentucky  
Energy and Environment Cabinet  
Department for Environmental Protection  
Division for Air Quality  
200 Fair Oaks Lane, 1<sup>st</sup>. Floor  
Frankfort, Kentucky 40601  
(502) 564-3999**

**AIR QUALITY PERMIT  
Issued under 401 KAR 52:040**

**Permittee Name:** Equitable Gathering, LLC  
**Mailing Address:** 740 North Lake Drive, Prestonsburg, KY 41653

**Source Name:** Equitable Gathering, LLC, Mayking Station  
**Mailing Address:** 157 Uriah Road  
Deane, KY 41812

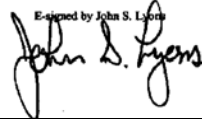
**Source Location:** Same as Above

**Permit ID:** S-08-108  
**Agency Interest #:** 85067  
**Activity ID:** APE20080003  
**Review Type:** Minor Source, Construction / Operating  
**Source ID:** 21-133-00107

**Regional Office:** Hazard Regional Office  
233 Birch Street, Suite 2  
Hazard, KY 41701  
(606) 435-6022

**County:** Letcher

**Application**  
**Complete Date:** August 20, 2008  
**Issuance Date:** October 2, 2008  
**Revision Date:**  
**Expiration Date:** October 2, 2018

E-signed by John S. Lyons  


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**John S. Lyons, Director  
Division for Air Quality**

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	Permit type	Activity#	Complete Date	Issuance Date	Summary of Action
<b>G-04-001 R1</b>	<b>General permit</b>	<b>APE20070001</b>	<b>06/26/2006</b>	<b>05/27/2005</b>	<b>General Title V permit for KYWV Gas</b>
<b>S-08-108</b>	<b>Initial permit</b>	<b>APE20080003</b>	<b>08/20/2008</b>	<b>TBD</b>	<b>Initial state-origin permit with modifications to the facility</b>

## **SECTION A - PERMIT AUTHORIZATION**

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:040, State-origin permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining other permits, licenses, or approvals that may be required by the Cabinet or other federal, state, or local agencies.

## **SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS**

### **EG01 (EP-01, 02, 03, 05 and EP-06) Four (4) 4-Cycle Lean Burn Natural Gas Fired Reciprocating Compressors and One (1) Natural Gas Fired Emergency Generator**

#### **Emission Group Description**

This emission group includes four natural gas-fired stationary reciprocating internal combustion engines and one natural gas fired emergency generator.

EP-01, EP-02, EP-03 Compressor Engine: Caterpillar G3516TALE

Date of Construction: 2007

Rated HP: 1340 each

Fuel Consumption at 100% Load: 9,723 scf/hr each

Control Device: None

EP-05 Compressor Engine: Caterpillar G3608TALE

Date of Construction: Proposed in 2008

Rated HP: 2370

Fuel Consumption at 100% Load: 15,706 scf/hr

Control Device: None

EP-06 Emergency Generator: Caterpillar G3412TA

Date of Construction: Proposed to replace existing engine in 2008

Rated HP: 604

Maximum Yearly Operating Hours: 500

Fuel Consumption at 100% Load: 4,346 scf/hr

Control Device: None

#### **APPLICABLE REGULATIONS:**

- *40 CFR 63 Subpart ZZZZ, National Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, applies to the new compressor engine (EP-05) and the emergency generator (EP-06), because they are located at an area source of HAP emissions and were constructed after June 12, 2006. However, pursuant to 40 CFR 63.6590 (c) new stationary RICE located at an area source may comply with requirements of Subpart ZZZZ by meeting the requirements of 40 CFR 60 Subpart JJJJ (for spark ignition internal combustion engines).
- *40 CFR 60 Subpart JJJJ, Stationary Spark Ignition Internal Combustion Engines*. Subpart JJJJ is applicable to manufacturers, owners, and operators of new stationary spark ignition internal combustion engines manufactured after July 1, 2007, for engines with maximum rated power capacity greater than 500 horsepower (hp). This regulation is applicable to the EP-05.

## **SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

### **NON-APPLICABLE REGULATIONS:**

- ▲ *40 CFR 60 Subpart IIII, NSPS for Stationary Compression Ignition Internal Combustion Engines*, does not apply to these units because they are spark-ignition IC engines and therefore the requirements of this subpart do not apply.
- ▲ *401 KAR 51:150, NO<sub>x</sub> Requirements for Stationary Internal Combustion Engines*, does not apply to these units because these four compressor engines and emergency generator engine are not identified as large NO<sub>x</sub> SIP call engines in the NO<sub>x</sub> SIP call engine inventory and are not subject to NO<sub>x</sub> control under a compliance plan pursuant to this rule.

### **1. Operating Limitations:**

Pursuant to 40 CFR 60.4243 (b) and 40 CFR 60.4245 (a)(3), the owner must demonstrate manufacturer's certification pursuant to 40 CFR 1048 and install and operate EP-05 (proposed compressor engine) in accordance with manufacturer's specifications.

#### **Compliance Demonstration Method:**

For compliance refer to 5. Recordkeeping Requirements.

### **2. Emission Limitations:**

Pursuant to 40 CFR 60.4233 (e), emissions from EP-05 must not exceed the following:

- 2.0 g/bhp-hr of NO<sub>x</sub>;
- 4.0 g/bhp-hr of CO; and
- 1.0 g/bhp-hr of VOC.

#### **Compliance Demonstration Method:**

For compliance with emission limits, refer to 3. Testing Requirements and 5. Recordkeeping Requirements.

### **3. Testing Requirements:**

Pursuant to 40 CFR 60.4243 (b)(1), if the is unit certified by the manufacturer pursuant to 40 CFR 1048, and is installed and operated according to manufacturer's specifications, no testing is required to satisfy federal regulations for EP-05.

### **4. Monitoring Requirements:**

Refer to Section C, General Conditions.

### **5. Recordkeeping Requirements:**

- a. Pursuant to 40 CFR 60.4245(a)(2), the owner must keep records of maintenance conducted on EP-05.
- b. Pursuant to 40 CFR 60.4245(a)(3), if EP-05 is a certification engine, the owner must keep documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90 and 1048.

**6. Reporting Requirements:**

Refer to Section C, General Conditions.

## **SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

### **EG02 (EP-03A and EP-03B) One NATCO Triethylene Glycol (TEG) Dehydration Unit (EP-03A), Glycol Dehydrator Reboiler (EP-03B) and Flare**

#### **Emission Group Description**

EP-04A                      Natural Gas Dehydrator Unit (NATCO)  
Date of Construction: 2007  
Maximum Capacity: 35 mmscf/day  
Control Device: Flare with pilot

EP-04B                      Natural Gas-fired Reboiler  
Date of Construction: 2007  
Rated burner Capacity: 1.55 mmBtu/hr  
Control Device: None

#### **APPLICABLE REGULATIONS:**

- ▲ *401 KAR 63:015, Flares*, is applicable to the flare controlling emissions from the dehydration unit.
- ▲ *40 CFR 63 Subpart HH, National Emission Standards for Hazardous Air Pollutants for Oil and Gas Production Facilities*, is applicable to the dehydration unit.
- ▲ *401 KAR 59:015 New Indirect Heat Exchangers*, applies to the reboiler because the heat input capacity is more than 1 mmBtu per hour.

#### **NON-APPLICABLE REGULATIONS:**

*40 CFR 63 Subpart HHH, (63.1270) National Emission Standards for Hazardous Air Pollutants for Natural Gas Transmission and Storage Facilities*, does not apply because the facility is a minor source of HAPs as determined by the use of the facility's design natural gas throughput of 35 million standard cubic feet per day (mmscf/day), and estimated maximum uncontrolled potential emissions.

#### **1. Operating Limitations:**

None

#### **2. Emission Limitations:**

- a. Pursuant to 401 KAR 59:015 , Section 4(1)(a), the particulate matter (PM) emissions from the reboiler (EP-04B) shall not exceed 0.56 lb/mmBtu.
- b. Pursuant to 401 KAR 59:015 Section 5(1)(a), the sulfur dioxide (SO<sub>2</sub>) emissions from the reboiler (EP-04B) shall not exceed 3.0 lb/mmBtu.
- c. Pursuant to 401 KAR 59:015 Section 4(2), the opacity of the visible emissions from the reboiler shall not exceed 20%. A maximum of 40% opacity shall be permissible for not more than 6 consecutive minutes in any 60 consecutive minutes during cleaning the fire box or blowing soot.

## **SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

### **Compliance Demonstration Method:**

The permittee shall be in compliance with the PM, SO<sub>2</sub>, and opacity limit at all times while burning only natural gas.

- d. Pursuant to 40 CFR 63.764(e), the permittee shall be exempt from the requirements of 40 CFR 63.764 (c) (1) and (d) since the actual average emissions of benzene from the NATCO glycol dehydrator unit process vent to the atmosphere shall be less than 0.9 megagrams per year (or 1 ton per year).

### **Compliance Demonstration Method:**

Pursuant to 40 CFR 63.772(b)(2)(i), the permittee shall determine actual average benzene emissions using the model GRI-GLYCalc<sup>TM</sup>, Version 3.0 or higher, and the procedures presented in the associated GRI-GLYCalc<sup>TM</sup> Technical Reference Manual. Inputs to the model shall be representative of actual operating conditions of the dehydration unit and may be determined using the procedures documented in the Gas Research Institute (GRI) report entitled “Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions” (GRI-95/0368.1)

### **3. Testing Requirements:**

Pursuant to 401 KAR 50:045 Section 1, performance testing using the Reference Methods specified in 401 KAR 50:015 shall be conducted as required by the Division.

### **4. Monitoring Requirements:**

Refer to Section C, General Conditions.

### **5. Recordkeeping Requirements:**

- a. Refer to Section C, General Conditions
- b. Pursuant to 40 CFR 63.774(d)(1), the permittee of a glycol dehydration unit that meets the exemption criteria in 40 CFR 63.764(e)(1)(i) or (ii) shall maintain the records of the actual average benzene emissions (in terms of benzene emissions per year) as determined in accordance with 40 CFR 63.772(b)(2).

### **6. Reporting Requirements:**

Refer to Section C, General Conditions.



## SECTION C – GENERAL CONDITIONS:

### 1. Administrative Requirements

- a. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:040, Section 3(1)(b) and is grounds for enforcement action including but not limited to the termination, revocation and reissuance, or revision of this permit.
- b. This permit shall remain in effect for a fixed term of ten (10) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division. [401 KAR 52:040, Section 15]
- c. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit. [Section 1a-11 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23]
- d. Pursuant to materials incorporated by reference by 401 KAR 52:040, this permit may be revised, revoked, reopened, reissued, or terminated for cause. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance shall not stay any permit condition. [Section 1a-4, 5, of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23]
- e. This permit does not convey property rights or exclusive privileges. [Section 1a-8 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23]
- f. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance. [401 KAR 52:040 Section 11(3)]
- g. This permit shall be subject to suspension at any time the permittee fails to pay all fees within 90 days after notification as specified in 401 KAR 50:038, Air emissions fee. The permittee shall submit an annual emissions certification pursuant to 401 KAR 52:040, Section 20.

### 2. Recordkeeping Requirements

- a. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of at least five

**SECTION C – GENERAL CONDITIONS (CONTINUED):**

years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality. [401 KAR 52:040 Section 3(1)(f) and Section 1b-IV-2 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23]

- b. The permittee shall perform compliance certification and recordkeeping sufficient to assure compliance with the terms and conditions of the permit. Documents, including reports, shall be certified by a responsible official pursuant to 401 KAR 52:040, Section 21.

**3. Reporting Requirements**

- a. (1) In accordance with the provisions of 401 KAR 50:055, Section 1, the permittee shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
  - i. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
  - ii. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.
- (2) The permittee shall promptly report deviations from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Reporting Requirement condition a.(1) above), the probable cause of the deviation, and corrective or preventive measures taken; to the Regional Office listed on the front of this permit within 30 days. Other deviations from permit requirements shall be included in the semiannual report. [Section 1b-V-3 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23]
- b. The permittee shall furnish information requested by the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the permit. [Section 1a-6 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23]
- c. Summary reports of monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation. The summary reports are due January 30th and July 30th of each year. All deviations from permit requirements shall be clearly identified in the reports. All reports shall be certified by a responsible official pursuant to 401 KAR 52:040, Section 21.

**SECTION C – GENERAL CONDITIONS (CONTINUED):**

**4. Inspections**

In accordance with the requirements of 401 KAR 52:040, Section 3(1)(f) the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times. Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency:

- a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation.
- b. To access and copy any records required by the permit.
- c. Inspect, at reasonable times, any facilities, equipment (including monitoring and pollution control equipment), practices, or operations required by the permit.
- d. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.

**5. Emergencies/Enforcement Provisions**

- a. The permittee shall not use as defense in an enforcement action, the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance. [Section 1a-3 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23]
- b. An emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
  - (1) An emergency occurred and the permittee can identify the cause of the emergency;
  - (2) The permitted facility was at the time being properly operated;
  - (3) During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
  - (4) The permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division within two working days after the time when emission limitations were exceeded due to the emergency and included a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
- c. Emergency provisions listed in General Condition 5.b are in addition to any emergency or upset provision contained in an applicable requirement. [401 KAR 52:040, Section 22(1)]
- d. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof. [401 KAR 52:040, Section 22(2)]

**SECTION C – GENERAL CONDITIONS (CONTINUED):**

**6. Compliance**

- a. Periodic testing or instrumental or non-instrumental monitoring, which may consist of record keeping, shall be performed to the extent necessary to yield reliable data for purposes of demonstration of continuing compliance with the conditions of this permit. For the purpose of demonstration of continuing compliance, the following guidelines shall be followed:
  - (1) Pursuant to 401 KAR 50:055, General compliance requirements, Section 2(5), all air pollution control equipment and all pollution control measures proposed by the application in response to which this permit is issued shall be in place, properly maintained, and in operation at any time an affected facility for which the equipment and measures are designed is operated, except as provided by 401 KAR 50:055, Section 1.
  - (2) All the air pollution control systems shall be maintained regularly in accordance with good engineering practices and the recommendations of the respective manufacturers. A log shall be kept of all routine and nonroutine maintenance performed on each control device. Daily observations are required during daylight hours of all operations, control equipment and any visible emissions to determine whether conditions appear to be either normal or abnormal. If the operations, controls and/or emissions appear to be abnormal, the permittee must then comply with the requirements of Section C – General Conditions, 3.a.(2), of this permit.
  - (3) A log of the monthly raw material consumption and monthly production rates shall be kept available at the facility. Compliance with the emission limits may be demonstrated by computer program, spread sheets, calculations or performance tests as may be specified by the Division [401 KAR 50:055, Section 2].
- b. Pursuant to 401 KAR 52:040, Section 19, the permittee shall certify compliance with the terms and conditions contained in this permit by January 30th of each year, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an approved alternative) to the Regional Office listed on the front of this permit in accordance with the following requirements:
  - (1) Identification of the term or condition;
  - (2) Compliance status of each term or condition of the permit;
  - (3) Whether compliance was continuous or intermittent;
  - (4) The method used for determining the compliance status for the source, currently and over the reporting period, and
  - (5) For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.
  - (6) The certification shall be postmarked by January 30th of each year. Annual compliance certifications shall be mailed to the following addresses:

Division for Air Quality	Division for Air Quality
Hazard Regional Office	Central Files
233 Birch Street, Suite 2	200 Fair Oaks Lane, 1 <sup>st</sup> . Floor
Hazard, KY 41701	Frankfort, KY 40601-1403

**SECTION C – GENERAL CONDITIONS (CONTINUED):**

- c. Permit Shield - A permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of permit issuance. Compliance with the conditions of this permit shall be considered compliance with all:
  - (1) Applicable requirements that are included and specifically identified in this permit; or
  - (2) Non-applicable requirements expressly identified in this permit [401 KAR 52:040, Section 11].

**7. Construction Requirements:**

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the construction of the equipment described herein, Emission Unit EG01 (EP-05 and EP-06) in accordance with the terms and conditions of this permit.

- a. Pursuant to 401 KAR 52:040, Section 12(3), unless construction is commenced on or before 18 months after the date of issuance of this permit, or if construction is commenced and then stopped for any consecutive period of 18 months or more, or is not completed within a reasonable timeframe, then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Upon a written request, the Cabinet may extend these time periods if the source shows good cause.
- b. Pursuant to 401 KAR 52:040, Section 12(4)(a) and 401 KAR 59:005, General provisions, Section 3(1), within 30 days following construction commencement, within 15 days following start-up and attainment of maximum production rate, or within 15 days following the issuance date of this permit, whichever is later, the owner and/or operator of the affected facilities specified on this permit shall furnish to the Regional Office listed on the front of this permit, with a copy to the Division's Frankfort Central Office, the following:
  - (1) Date when construction commenced.
  - (2) Start-up date of each of the affected facilities listed on this permit.
  - (3) Date when maximum production rate was achieved.
- c. (1) Pursuant to 401 KAR 59:005, General provisions, Section 2(1), this permit shall allow time for the initial start-up, operation and compliance demonstration of the affected facilities listed herein. However, within 60 days after achieving the maximum production rate at which the affected facilities will be operated, but not later than 180 days after initial start-up of such facilities, the owner or operator shall demonstrate compliance to a duly authorized representative of the Division for Emission Unit EG01.
  - (2) Pursuant to 401 KAR 59:005, General provisions, Section 3(1)(b), unless notification and justification to the contrary are received by this Division, the date of achieving the maximum production rate at which the affected facilities will be operated shall be deemed to be 30 days after initial start-up.

**SECTION C – GENERAL CONDITIONS (CONTINUED):**

- d. Operation of the affected facilities authorized by this permit shall not commence until compliance with applicable standards specified herein has been demonstrated in accordance with the requirements of 401 KAR 52:040, Section 12(4)(b). Until compliance is demonstrated, the source may only operate for the purpose of demonstrating compliance.

**SECTION D - INSIGNIFICANT ACTIVITIES**

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:040, Section 6. Although these activities are designated as insignificant the permittee must comply with the applicable regulation. Process and emission control equipment at each insignificant activity subject to an opacity standard shall be inspected monthly and a qualitative visible emissions evaluation made. Results of the inspection, evaluation, and any corrective action shall be recorded in a log.

<u>Description</u>	<u>Generally Applicable Regulation</u>
Eight (8) Storage Vessels each having capacity less than 10,567 gallons and containing compressor oil and organic liquids with vapor pressure less than 1.5 psia.	None